REMARKS

Claims 1-49 are pending, with claims 1, 18, 35, 46 and 48 being independent. Reconsideration and allowance of the above-referenced application are respectfully requested.

Rejections Under 35 U.S.C. § 112

Claims 48 and 49 stand rejected under 35 U.S.C. § 112 as allegedly being indefinite. This contention is respectfully traversed.

Examiner Nguyen is thanked for the telephone interview, which was conducted with Mr. Hunter on December 26, 2007. During the interview, claims 48 and 49 were discussed. In response to Examiner Nguyen's inquiry, Mr. Hunter pointed out that examples of the claimed subject matter are shown in FIGs. 1 and 3 of the present disclosure at reference numerals 140, 300 and 310. Mr. Hunter also directed attention to paragraphs [0025] to [0027] of the present disclosure, which describe examples of the claimed subject matter in connection with FIG. 3. In light of these examples, agreement was reached that the rejection of claim 48 and 49 under 35 U.S.C. § 112 should be withdrawn.

Rejections Under 35 U.S.C. § 102

Claims 1, 18, 35-39, 48 and 49 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Singhal et al. (U.S. 5,488,385, hereinafter Singhal). This contention is respectfully traversed.

The Office now asserts that, "Singhal teaches the use of CPU 12 to instruct or identify displaying the LCD and CRT. It is realized by using hardware, CPU 12, and by using the

software application on the computer is logically equivalent. Moreover, those skilled in the computer art would recognize that such an implementation can be expressed in terms of either computer program (software application) or a CPU 12 (hardware) implementation, the two being functionally equivalent of one another." (*See* 10-29-2007 Office Action at page 13.) First, it should be noted that a "computer program" is not equivalent to a "software application" in light of the use of this terminology in the present patent application. Moreover, Singhal goes into great detail in his Background section regarding the disadvantages of using multiple chip sets, and Singhal's invention specifically involves using software to emulate dual VGA controllers. Thus, Singhal teaches that hardware and software implementations are **not equivalent**.

With respect to the presently claimed subject matter, one of ordinary skill in the art would recognize that the use of a software application is **not equivalent** to the use of hardware. A software application can be downloaded over a computer network, and the software application in claim 1 performs the claimed identifying and generating. This can result in significant advantages, e.g., "A professional high-fidelity display presentation can be given from any low-end device, such as a personal digital assistant, and there is no need to know beforehand what kind of display device might be encountered when it comes time to make the presentation. [...] The data and/or the document format need not be specifically prepared for rendering to a particular target output device, and a presentation can be made to any target output device without specialized presentation hardware." (*See* Specification at ¶s 10-11.) In contrast, it would be impossible to download hardware over a computer network, install such hardware on a personal digital assistant, and then use the installed hardware to give a presentation without

knowing beforehand what kind of display device might be encountered when it comes time to make the presentation. Thus, hardware is **not equivalent** to software in the present context.

Furthermore, even assuming for the sake of argument that hardware is equivalent to software, Singhal does not teach that either the hardware or the software of his invention **identifies** display characteristics of multiple display devices. The display characteristics are stored in memory but are not **identified** by the hardware. The cited portion of Singhal (col. 5, lines 47-60) does **not** describe identifying display characteristics of multiple display devices. Rather, Singhal describes using previously provided display information to effect dual VGA controller emulation. There is no active identification of display characteristics of multiple display devices in Singhal.

In addition, as addressed in the last Response, Singhal **does not describe** generating **simultaneous independent views** of **an electronic document** on the display devices by **separately rendering the electronic document** to each of the display devices **based on the identified display characteristics** of the device, as recited in claim 1. It was further noted that "rendering" is a term of art in the software application field, which is commonly understood by those of ordinary skill in the art to mean, in general, the conversion of a high-level object-based description into a graphical image for display. Nothing in Singhal describes separately rendering an electronic document to generate simultaneous independent view of the electronic document.

The Office now asserts that, "The term 'render' is to convert graphics from a file into visual form," and also that, "Singhal discloses the frame data for the separate display devices 52 and 54, col. 6, lines 36-37, and lines 56-60." (*See* 10-29-2007 Office Action at page 13.) It is respectfully pointed out the "frame data" in Singhal is **not** "a file." As described in Singhal:

> In the preferred embodiments of the present invention, where independent images are to be simultaneously displayed, the frame data for the separate display devices 52, 54 is stored in an interleaved or alternating series of data storage locations. As shown, a preferably 32 bit word of frame data is stored in alternating word locations for each of the display devices. [...]
>
> In support of this optimal interleaving of the frame data for separate display devices, the video controller 50 logically addresses the frame buffer 58 as two independent memory spaces relative to the processor 12. However, the resulting physical addressing of the frame buffer 58 provides for the interleaved storage of frame data words as illustrated in FIG. 4. Consequently, the highest possible data bandwidth is provided between the frame memory 58 and video controller 50 while remaining consistent with the logical appearance of two separately addressed and otherwise independent video memories.

(*See* Singhal at col. 6, lines 36-41 and 50-60.) Singhal says nothing about how to convert a file into the frame data that is stored in the frame buffer 58. Thus, under the Office's own interpretation of the term "render", Singhal does **not** describe **separately rendering an electronic document** to multiple display devices.

The Office also notes that, "Singhal teaches a notebook computer, col. 4, line 59, which is used to store any files in the memory, which implies an electronic document." (*See* 10-29-2007 Office Action at page 13.) Assuming for the sake of argument that Singhal does inherently disclose an electronic document, the rest of the disclosure in Singhal makes very clear that such an electronic document would be rendered to frame data, and the **frame data** is separately transferred to the CRT driver and the LCD controller. (*See* Singhal at col. 5, line 40, to col. 7, line 25.) Thus, nothing in Singhal teaches or suggests, "**generating** [...] **simultaneous independent views of an electronic document** on the display devices by **separately rendering**

the electronic document to each of the display devices **based on the identified display characteristics** of the device." (Emphasis added.)

For all of the above reasons, independent claim 1 should be in condition for allowance. Independent claims 18, 35 and 48 include features similar to independent claim 1 and should thus be patentable for at least similar reasons. Independent claim 18 recites, "A software product tangibly embodied in a machine-readable medium, the software product comprising instructions operable to cause a data processing apparatus to **perform operations from an application layer** of the data processing apparatus, the operations comprising: **identifying display characteristics** of multiple display devices; and **generating simultaneous independent views** of **an electronic document** on the display devices by **separately rendering** the electronic document to each of the display devices **based on the identified display characteristics** of the device." (Emphasis added.) Singhal does not describe the claimed identifying and generating operations performed **from an application layer** of a data processing apparatus and does not describe **separately rendering an electronic document** to multiple display devices **based on the identified display characteristics**. Thus, independent claim 18 should be in condition for allowance.

Independent claim 35 recites, "one or more peripheral display devices; and a data processing system comprising a primary display device and **a software application** that generates **simultaneous independent views** of **an electronic document** on the display devices **based on display characteristics** of the display device as **identified by the software application**." (Emphasis added.) Singhal does not describe a software application that generates **simultaneous independent views** of **an electronic document** on the display devices

based on display characteristics of the display device as **identified by the software application**. Thus, independent claim 35 should be in condition for allowance.

Dependent claims 36-39 should be allowable over Singhal based on the above arguments and the additional recitations they contain. For example, claim 37 recites, "wherein the software application identifies the display devices that are currently interfaced with the data processing system by **periodically polling** display interface hardware." (Emphasis added.) The Office Action mailed 05-07-2007 fails to address this claimed subject matter, disregarding the claim language when making the rejection. (*See* 05-07-2007 OA at page 4.) The current Office Action now cites to col. 6, lines 6-19, as allegedly disclosing this limitation. However, as described in this cited portion of Singhal:

> In the preferred embodiment, all data transferred relative to the video memory 36 passes through a cache buffer circuit 64 that provides for multiple buffered data paths. The cache buffer 64 is preferably a multiplexed set of parallel FIFO buffers sharing a common data path 66 to the video memory 36, though otherwise having separate data path connections. One such other data path connection is to a bus 68 that provides for the transfer of control and frame data between the video controller 50 and video memory 36. Another data connection is to the peripheral bus 16 via the data lines 70. Finally, in the preferred embodiment, a data connection is made between the cache buffer 64 and an LCD controller 74. Control over the cache buffer 64 is provided by the video controller 50 via control lines 76.

(*See* Singhal at col. 6, lines 6-19.) Nothing in this portion of Singhal, or any other portion of Singhal, describes **periodically polling** display interface hardware. Thus, there is a clear legal or factual deficiency in the rejection of claim 37, and claim 37 should be allowable for at least this additional reason.

Independent claim 48 recites, "software-application means for accessing an electronic document; and **software-application means** for **outputting** multiple, **simultaneous, independent views** of **the electronic document** to different display hardware devices having different screen resolutions and color depths." For reasons similar to those addressed above, it should be clear that Singhal does not describe **software-application** means for outputting multiple, **simultaneous**, **independent** views of the **same electronic document** to different display hardware devices, as claimed. Thus, independent claim 48 should be in condition for allowance.

Dependent claim 49 should be allowable over Singhal based on the above arguments and the additional recitation it contains. Claim 49 recites, "software-application means for controlling the outputting software-application means based on **user** configuration." (Emphasis added.) The previously cited portion of Singhal (col. 5, lines 51-60) says nothing about enabling a **user** to control how the video control unit 50 or the control software of Singhal operate. The Office now cites to col. 6, lines 2-5, as allegedly disclosing the claimed subject matter. (*See* 10-29-2007 Office Action at page 14.) However, as described in Singhal:

> One or more frame buffers for the display devices 52, 54 are also provided in an image storage area 58, while a spare storage area 60 provides for temporary storage of frame data lines. The video controller 50 selects data locations within the video memory 36 via control and address lines 62. Although the video memory 36 will typically include a plurality of RAM chips, the video memory 36 is, as a whole, a single logical memory space. Consequently, optimum use can be made of the total frame data image storage area 58 dependent on the desired resolution and color depth for the display devices 52, 54.

(*See* Singhal at col. 5, line 62, to col. 6, line 5.) This newly cited portion of Singhal still says nothing about enabling a **user** to control how the video control unit 50 or the control software of Singhal operate. Thus, there is clear legal or factual deficiency in the rejection of claim 49, and claim 49 should be allowable for at least this additional reason.

Rejections Under 35 U.S.C. § 103

Claims 2-8, 11, 19-25, 28, 41 and 42 stand rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of Terayama et al. (US 7,010,551). This contention is respectfully traversed.

Terayama et al. fails to cure the deficiencies of Singhal. Thus, dependent claims 2-8, 11, 19-25, 28, 41 and 42 should be allowable over the cited art, based on the arguments presented above, and the additional recitations these claims contain. For example, claim 2 recites, "**rendering** [...] according to presentation tags [...] **indicating device-dependent rendering** to be applied." Terayama et al. describes "**extracting**, from an HTML file [...], data displayable on a limited-capability device, in accordance with the identifiers, [...] the file conversion method comprising: a step of determining what characteristic of the HTML file is to be converted; a step of detecting the tags by reading the file; a step of determining whether the data indicated by the detected tags is displayable on the limited-capability device; a step of extracting the data, the start and the end of which are indicated by the detected tags and which is determined to be displayable on the limited-capability device." (*See* Terayama et al. at col.17, line 65, to col. 18, line 16.) Nothing in the cited portion of Terayama et al. suggests that the tags indicate device-dependent rendering. In fact, there is no indication that these tags are designed to specify which

content is to be rendered to which display device. Rather, the method in Terayama et al. checks the tags to see if the indicated data is displayable on the limited-capability device. In other words, the information linking the data to a specific type of display device is in the software performing the method only, not the tags themselves. Thus, Terayama et al. does not teach or suggest separately **rendering** an electronic document **according to presentation tags** associated with content in the electronic document, the presentation tags **indicating device-dependent rendering to be applied** to the content **based upon assigned device types of the display devices**. Thus, claims 2-4 should be allowable over the cited art for at least this additional reason.

Furthermore, it is noted that in response to these previously presented arguments regarding claims 2-4, the Office merely restates the exact same assertions regarding Figure 3A of Terayama. (*CF* 10-29-2007 Office Action at pages 5 and 13, and 05-07-2007 Office Action at page 5.) Thus, the Office has not in fact addressed the prior argument regarding claims 2-4.

In addition, claim 3 recites, "wherein identifying the display characteristics comprises periodically re-identifying the display characteristics of the display devices, in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically." The cited portion of Singhal (col. 13, lines 50-51) simply states, "6. A display subsystem providing for the simultaneous redisplay of independent images to multiple independent display devices[.]" This does **not** describe periodically re-identifying the display characteristics of the display devices to allow display devices to be added and removed dynamically. Thus, there is clear legal or factual deficiencies in the rejection of claims 2-4.

Claims 46 and 47 stand rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of Okuley et al. (US 6,956,542). This contention is respectfully traversed.

Independent claim 46 recites, "one or more peripheral display devices; and a data processing system comprising a primary display device and **a software application** that **generates simultaneous independent views** of **an electronic document** on the display devices **based on display characteristics** of the display device **as identified by the software application**, wherein a primary view from the independent views includes rendered content not included in a secondary view from the independent views, and the primary view includes at least **a portion of a user interface that provides control over the independent views on the display devices both together and separately**, and the secondary view forms part of a presentation." (Emphasis added.) For reasons similar to those addressed above, it should be clear that Singhal does not describe a data processing system comprising a primary display device and **a software application** that **generates simultaneous independent views** of an electronic document on the display devices **based on display characteristics** of the display device **as identified by the software application**. Okuley et al. fails to cure the deficiencies of Singhal. Moreover, the cited portions of Singhal and Okuley fail to describe **a portion of a user interface that provides control over the independent views on the display devices both together and separately**. Thus, independent claim 46 should be in condition for allowance, and dependent claim 47 should be allowable based at least on its dependence form claim 46.

Claims 9, 10, 12-15, 26, 27, 29, 31, 32 and 40 stand rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of Shih (US 7,102,591). Claim 43 stands rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of

Terayama et al., and further in view of Tafoya et al. (US 5,917,480). Claims 44 and 45 stand rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of Terayama et al. in view of Tafoya et al., and further in view of Meyn et al. (US 5,859,623). Claims 13, 16, 17, 30, 33 and 34 stand rejected as allegedly being unpatentable under 35 U.S.C. § 103(a) over Singhal in view of Shih, and further in view of Meyn et al. These contentions are respectfully traversed.

Neither Shih, Tafoya et al. nor Meyn et al. cure the deficiencies of Singhal. Thus, all of dependent claims 9, 10, 12-17, 26, 27, 29-31, 32-34, 40 and 43-45 should be allowable over the cited art, based on the arguments presented above, and the additional recitations these claims contain. With respect to the additional recitations, claim 12 recites, "wherein generating the independent views of the electronic document comprises generating **a user interface** with the first view that provides **control over the independent views** on the display devices **both together and separately**." (Emphasis added.) The Office Action contends that the claimed user interface is inherent in Singhal's reference to "notebook computers" at col. 4, line 59. (*See* 10-29-2007 Office Action at page 9.) This inherency assertion is specifically traversed and is not conceded.

To establish an inherent feature not expressly disclosed, it must be clear "that the missing descriptive matter is **necessarily present** in the thing described," (See MPEP § 2131.01, citing *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991), emphasis added). While notebook computers do have user interfaces, notebook computers do not **necessarily** have a user interface, generated with a first view of simultaneous independent views

of an electronic document, that provides control over the independent views on display devices **both together and separately**. As described, for example, in the present disclosure:

> The user interface can be generated to provide control over the independent views. A presenter can use a single user interface on one machine to control the views on both that machine and a second machine displaying a presentation to an audience. For example, the presenter can use the user interface to make notes in the electronic document during the presentation, where those notes do not appear in the view of the document that the audience sees, and the presenter can use the user interface to adjust the zoom level on the audience view without affecting a zoom level on the machine presenting the user interface. Thus, the user interface can apply different functionality differentially among the display devices, including potentially exposing different kinds of functionality for the different display devices.

(*See* Specification at ¶ 28.) Nothing in Singhal teaches or suggests this subject matter, as claimed, either expressly or inherently. Moreover, in response to the previous traversal of the inherency assertion, the Office merely restates the same general comment about a notebook computer. (*See* 10-29-2007 Office Action at page 14.) The actual claim language (generating a user interface **with the first view** that provides control over the independent views on the display devices **both together and separately**) has not been addressed by the Office. Thus, there exists a clear legal or factual deficiency in the rejection of claims 12-17, and claims 12-17 should be allowable for at least this additional reason.

Conclusion

The foregoing comments made with respect to the positions taken by the Examiner are not to be construed as acquiescence with other positions of the Examiner that have not been

explicitly contested. Accordingly, the above arguments for patentability of a claim should not be construed as implying that there are not other valid reasons for patentability of that claim or other claims.

A formal notice of allowance is respectfully requested. In the absence of such, a telephone interview with the Examiner is respectfully requested to discuss the references and the independent claims of the present application.

No fees are due at this time. Please apply any necessary charges or credits to deposit account 06-1050.

Respectfully submitted,

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